

XIV.—Description of a new Species of *Lycosa* living in the Island of Madeira; with some Remarks on *Lycosa tarentuloides maderiana*, Walckenaer. By JAMES YATE JOHNSON, CORR. Mem. Zool. Soc.

Lycosa Blackwallii, n. sp.

The *legs* are long, robust, thickly clothed with hair, and furnished with sessile spines; they are brownish grey, with broad rings of dark brown. The metatarsus and tarsus of the two anterior pairs of legs are black, and the undersides of the other joints are black, or very dark brown. At the distal extremities and on the upper sides of the femur and genua of the first two pairs of legs, as well as at the extremities of some of the joints of the two posterior pairs of legs, there is a patch of orange hairs. Each tarsus is terminated by two curved pectinated claws and a minute simple claw. The fourth legs are the longest; and then come the first, second, and third, the last being the shortest.

The *palpi* are rather short, and each is terminated by a curved pectinated claw. The last joint is black or dark brown, and the uppersides of the penultimate and antepenultimate joints are orange.

The *falcès* are powerful, conical, vertical, and armed with a strong curved fang at the extremity, and five or six teeth on the inner surface. The orifice of the poison-duct is conspicuous.

The *maxille* are straight, and have rounded extremities, which are enlarged and obliquely truncated on the inner side. The lip has the middle broader than either its base or apex, and the latter is truncated and hollowed.

The *sternum* is oval, polished, and hairy. All these parts are of a deep brown hue, sometimes almost black.

The *cephalothorax* is compressed at its anterior part, and rounded at the sides; it is convex, has a slight longitudinal furrow in the median line, and is densely clothed with short hair of a brownish-grey colour. At each side is a series of brownish-grey suboval spots surrounded by black; these are more apparent in the male than the female. On the median line in the posterior half of the cephalothorax there is a delicate Y-shaped black mark, the fork being directed forwards, and the extremities of the tines being dilated. Posteriorly there are two broad longitudinal black bands or blotches, one at each side of the median line; and these bands are continued upon the anterior part of the abdomen, where they have between them a patch of long orange hairs.

The four anterior *eyes* are equal in size, and form a straight transverse row near the frontal margin of the cephalothorax.

The *abdomen* is oviform, a little broader posteriorly than in front, where it projects slightly over the end of the cephalothorax ; it is convex above, and thickly covered both above and below with short hair, of a brownish-grey colour, plentifully marked with small black spots. About the middle of the upper-side is a pair of closely approximated black spots, having the shape of right-angled triangles, and so disposed that the vertical side of each is next the median line. Behind these, on the median line, is a series of triangular black spots, which have their apices pointing forwards, and their posterior angles more and more produced laterally as they approach the hinder extremity of the abdomen. The first of these spots is the largest, and its apex is truncated. The apical portion of the hinder ones becomes gradually less. At each side of this median series are some groups of black spots, forming blotches of irregular shape. Along the middle of the underside is a broad longitudinal black band, which narrows behind. The spinnerets and sexual organs are black or deep brown.

The male resembles the female, except that it is smaller, the abdomen shorter, the legs of the third pair proportionally longer, and the colours more decided. The following are the dimensions of an adult male and female in parts of an inch :—

	♂	♀
Length	$\frac{1\ 5}{2\ 0}$	$\frac{2\ 2}{2\ 0}$
Length of cephalothorax	$\frac{3}{1\ 0}$	$\frac{4}{1\ 0}$
Width " "	$\frac{7}{3\ 0}$	$\frac{9}{3\ 0}$
Width of the abdomen	$\frac{5}{2\ 0}$	$\frac{6}{2\ 0}$
Length of a leg of the 4th pair . .	$1\ \frac{1}{2\ 0}$	$1\ \frac{1\ 0}{2\ 0}$
Length of a leg of the 3rd pair . .	$\frac{1\ 6}{2\ 0}$	$\frac{2\ 1}{2\ 0}$

This handsome spider may be at once distinguished from the great *Lycosa* of Deserta Grande (*L. ingens*, Blackw.) and from that of Porto Santo (*L. tarentuloides maderiana*, Walck.) by the Y-shaped mark on the cephalothorax, and by the black triangular spots on the upperside of the abdomen. From the former it may be further distinguished by the orange marks on the palpi and legs, and from the latter by the black and grey annuli on the legs, and by the eyes of the first row being nearly equal in size, whereas in the Porto-Santan spider those forming the middle pair of that row are decidedly larger than the other two.

Examples were first obtained by me three or four years ago, from holes in a rock in the lower part of the ravine of S. Jorge, on the north side of the island of Madeira. Others have been lately obtained by Frederick Pollock, Esq., from banks of earth covered with moss, in two localities upwards of 2000 feet above Funchal, on the south side of the island ; and my description

has been drawn up from living specimens which he kindly presented to me.

This spider feeds eagerly in captivity on large "blue-bottle" flies. The only web which has been observed was a small circular one fabricated by an individual whilst in captivity. This web was of close texture, open above at the middle, and less than a shilling in size. It was apparently the foundation of a nest, in which, however, no eggs had been deposited.

It is remarkable that Madeira, Porto Santo, and the Desertas should each have their own peculiar large species of *Lycosa*—a fact that goes to confirm the testimony already given by the land-shells and beetles, as to the distinctness of the aboriginal fauna in the different parts of this insular group.

This new species of *Lycosa* is dedicated to that able arachnologist, John Blackwall, Esq., the author of a Monograph of British Spiders, the first part of which has been recently published by the Ray Society. In the 'Annals and Magazine of Natural History' for October 1859 will be found descriptions by Mr. Blackwall of a collection of Madeiran Spiders made by me in the preceding year, and in the same publication for May 1862 descriptions of another collection from the same island.

A remarkably fine female individual of *Lycosa tarentuloides maderiana*, Walck., having been lately presented to me by the Baron do Castello de Paiva, I will take this opportunity of making a few remarks upon it, chiefly with reference to the colours of the living spider. The example, which was found on the uninhabited islet of Ferro, near Porto Santo, had the following dimensions:—

	inch.
Length	$1\frac{9}{20}$
Length of cephalothorax	$\frac{6}{10}$
Breadth " "	$\frac{9}{20}$
Breadth of abdomen (nearly)	$\frac{6}{10}$
Height " "	$\frac{5}{10}$
Length of a leg of the 4th pair	$1\frac{9}{10}$
" " " 3rd pair	$1\frac{4}{10}$

The cephalothorax has a dark greyish-brown hue, and there is a yellowish-grey band along each side, and another along the middle, the latter having some small orange dashes at its posterior part. The abdomen is of a brownish (or rusty) black colour. On the upperside two obscure dark longitudinal lines enclose an elongated fusiform or lanceolate space. These lines approximate very gently posteriorly, and their termination is behind the middle of the abdomen. At each side of the median line,

where the fusiform space is broadest, there is a small rounded pit just outside that space; and immediately behind each, there is a still smaller pit. Near the middle of the length of the abdomen is another pair of pits, which are further apart than the anterior pair. All of these pits have a chestnut-brown colour. At each side of the anterior end of the fusiform space is a black blotch, and between them is a small patch of yellowish brown. On the underside of the abdomen there is a longitudinal brownish band at each side of, but at some distance from, the median line. These bands are furthest apart at the middle; they approximate, but do not meet, as they approach the spinnerets. As to the legs and palpi, the uppersides of the five distal joints of the former and of the three distal joints of the latter are orange, which is very intense on the palpi and the two anterior legs. The undersides of the legs and palpi are black, and of this colour are also the falces, maxillæ, labrum, and sternum.

BIBLIOGRAPHICAL NOTICE.

English Botany; or, Coloured Figures of British Plants. Third Edition. Enlarged, rearranged according to the Natural Orders, and entirely revised; with Descriptions of all the Species. Svo. London: R. Hardwicke. 1863.

WE have waited for the completion of the first volume of this great work before taking any notice of it. Now that seven monthly numbers have been issued and a volume completed, the proper time has arrived for a few remarks. It is quite unnecessary to say anything concerning the original 'English Botany,' projected and the plates executed by James Sowerby and accompanied by descriptions (each limited to one small page) from the pen of Sir J. E. Smith. It was, and even now continues to be, the most complete illustration of the flora of any country which has appeared. But, having been commenced in the year 1790 and concluded in 1814, the descriptive part has long been somewhat obsolete, and interesting chiefly for the many curious historical facts to be learned from it. Its technical accounts of the plants were meagre, even when published, and are now very far from furnishing the information expected by botanists. Also the plates are not always such as we now desire: the dissected parts are not magnified to a proper extent, and many things required in the present state of science are altogether wanting. It also appears, from an examination of the original drawings from which the plates were engraved, that alterations were often made by Smith, which have sometimes been very unwise. He has occasionally altered Sowerby's drawing to correspond tolerably with the plant known to him, whereas an examination of the original sketch shows that the artist and the author had different plants in view. Again, the want